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Division of Wildlife Conservation

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1 July 1994 - 30 June 1995

BISON

Mary V. Hicks, Editor



LEONARD LEE RUE

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DEPARTMENT OF FISH AND GAME
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Mary Hicks
Publications Specialist
ADF&G, Wildlife Conservation
P.O. Box 25526
Juneau, AK 99802
(907) 465-4190

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Project Title: Southcentral Bison Population Management

Project Location: Unit 11 (13,300mi²)
Chitina and Copper rivers

Project Objectives: Maintain the Chitina River bison herd at a minimum of 50 overwintering animals classified as older than calves. Maintain the Copper River herd at a minimum of 60 overwintering bison classified as older than calves and maintain and monitor 5 radiocollars on individuals in the herd.

Work Accomplished During the Project Segment Period:

Chitina River: Herd population size was estimated at 34 bison based on results of 2 aerial surveys in June 1995. Herd composition included 33 adults and 1 calf.

The Chitina River bison hunting season was closed by emergency order 02-22-89 on 1 July 1989 and has remained closed.

Flooding of the Chitina River during 1990 started a process of river rechannelization, causing an extensive change in the Chitina bison range. The river channels the north bank, and approximately one-half of the vegetation on heavily grazed river bars on the north banks east of Bear Island has eroded. Substantial areas of bison habitat have been lost since the river started rechannelizing to the north.

Copper River: The Copper River bison herd size was estimated to include 64 animals based on results of aerial surveys during June 1995. Herd composition included 54 adults and 10 calves.

The Copper River bison hunting season was closed by emergency order 02-22-89 on 1 July 1989 and has remained closed.

Progress Meeting Project Objectives:

Chitina River: Calf production and survival in the Chitina herd declined for the third year from an observed high of 7 calves in 1992. The number of adults observed increased slightly from prior years. Most of this increase was attributable to favorable count conditions that resulted in locating a number of adult bulls which were adjacent to the main herd this year. Adult bulls are usually solitary and may not be near the main herd. One calf in the Chitina herd indicates very poor calf production or low neonatal survival. The cause for poor calf recruitment was unknown. The spring 1995 herd estimate of 33 bison was well below management objectives for this herd. A subjective evaluation of flooding on the Chitina bison range is that the herd has lost an appreciable amount of heavily utilized habitat. This is an ongoing process and more habitat is threatened. Although the effects of this are probably short-term, they may include reduced productivity and/or overwinter survival. Hunting of the flooding herd should remain closed until herd numbers exceed the minimum management objective by at least 5 adult bison.

Copper River: The Copper River Bison Hunt was closed because of poor calf recruitment in 1989 when we observed only 3 calves. Calf production subsequently increased and yearly calf production has ranged between 9-15 per year. Bison numbers observed during annual survey flights increased slightly between 1990 and 1992 but have declined the last 3 years. Our data indicate calves are not surviving their first year of life or natural mortality of adults exceeded recruitment the last 3 years. The reason for the poor herd performance in recent years is unknown. However, severe winters coupled with poor range conditions are considered possible limiting factors. Predation rates on Copper River bison are unknown. Accidents are a source of mortality in this herd with numerous incidents of bison falling off cliffs or going through the ice into the Copper River.

The 1995 population estimate of 54 adults is well below the management objective for this herd. Hunting of this herd should not be allowed until 80 to 90 adult bison are observed and calf production approaches 15 per year. Allowing the herd to increase should provide a minimum harvest of 8 bison annually. When the herd numbers approximately 60 bison, recruitment is often less than the combined loss caused by hunting and natural mortality, producing periodic hunt closures.

Bison from the Copper River herd utilized agricultural fields in the Kenny Lake portion of Subunit 13D during the winter of 1993-94. Use of this area continued this year by a few individual animals, but the main herd has yet to cross into the Kenny Lake area. If bison continue to use this area, we expect increased human conflicts with bison.

Segment Period Project Costs:

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	0.0	2.6	2.6
Actual	0.0	1.4	1.4
Difference	0.0	1.2	1.2

Submitted by:

Jeff Hughes
Survey-Inventory Coordinator

Project Title: **Region III Bison Population Management**

Project Location: Units 19, 20, and 25

Farewell Herd (Unit 19)

Project Objectives and Activities:

1. Maintain a minimum population of 250 bison and determine desired harvest level.
 - a. Conduct aerial surveys to assess population size and age composition.
 - b. Administer permit hunt and monitor harvest.
 - c. Assess carrying capacity of the current Farewell Bison Range.

Work Accomplished During the Project Segment Period: We conducted 1 bison composition count during spring 1995 in the Farewell area. Of 110 bison observed during the 30 April survey, 89 were adults and subadults and 21 were calves (19.9%). I assume June surveys will reveal higher calf percentages following additional parturition, as well as additional adults.

During the 1994-95 regulatory year, we conducted 2 drawing permit hunts for the Farewell bison herd. We issued 50 permits and the hunt was monitored through mandatory hunter questionnaires and interviews. Harvests were monitored during both hunts.

Preliminary range assessment was conducted during summer 1994 on the Farewell Bison Range. These investigations indicated the range is in good shape and probably capable of sustaining more bison than are now in the herd.

Progress Meeting Project Objectives: The Farewell herd remained at well over 200 animals, and the population is probably between 250 and 300, above the management objective. Of 50 permittees, 34 participated in the hunts, and 23 bison were legally harvested (68% success rate). Calf production remains high, but the soundness of the range indicates the herd can be increased without adverse effects on the habitat. Therefore, we have opted to let the herd increase to 300 adults. This new objective should be attainable by summer 1998 by reducing the available permits to 20 in each of the 2 scheduled hunts.

Delta Herd (Unit 20D)

Project Objectives and Activities:

1. Maintain a healthy, free-ranging bison herd in the Delta Junction area.
 - a. Prevent the transmission of diseases from livestock to the Delta bison herd.
 - b. If diseases are transmitted to the Delta bison herd, prevent the spread of diseases from bison to other wildlife species.

2. Reduce conflicts between bison and the public, including but not limited to agricultural interests, in the Delta Junction area.
 - a. Manage bison and summer range habitat so that at least 75% of the Delta bison herd remains west of the Richardson Highway (between Black Rapids Glacier and the Tanana River) until August 20 annually.
 - b. Keep the Delta bison herd out of the Delta Agricultural Project until October 1 annually.
 - c. The department will provide assistance to the public experiencing bison conflicts.

3. Manage the Delta bison herd to provide the greatest opportunity to hunt and view bison by providing maximum biological yield from public lands, while accomplishing the goals and objectives of a free-ranging, healthy herd and a reduction in conflicts.
 - a. Calculate an accurate annual budget for accomplishing recommended goals and objectives.
 - b. Seek sufficient funding to accomplish all goals and objectives of managing the Delta bison herd on public lands.
 - c. Manage the Delta bison herd for maximum productivity with a sex ratio of no less than 30 bulls:100 cows.
 - d. The department will organize volunteer efforts to help accomplish goals and objectives.
 - e. Manage the Delta bison herd at 360 bison precalving from July 1, 1993-November 1, 1995. The Delta bison management program will be evaluated in November 1995 to determine compliance with goals and objectives, funding and staffing levels, and biological capacity of public lands. Thereafter, herd size will be adjusted, to include increasing or decreasing as required, to match resources with goals and objectives.
 - f. Administer the Delta bison hunt to reduce landowner/hunter conflicts and to maintain hunter access to private land in the Delta Agricultural Project to the extent possible.
 - g. Investigate methods and funding sources to improve bison viewing opportunities for the public.

Work Accomplished During the Project Segment Period: Blood samples were collected from hunter killed bison for serological studies to evaluate the health of the bison herd. Results indicate that bison continue to be free from most of the infectious diseases for which serum antibody tests are conducted with the exception of parainfluenza III.

Bison forage was managed on the Delta Junction Bison Range (DJBR) to reduce bison/agricultural conflicts. Forage management consisted of fertilizing perennial grasses, planting annual crops for bison forage, and controlling noxious plants by mowing and disking.

Movements of radiocollared bison were monitored during 1994-95 to determine when bison left the summer range, when they left the DJBR, and when they moved into the Delta Agricultural Project. Bison began migrating from the Delta River to the DJBR approximately July 25, 1994. Bison were first observed in the Delta Agricultural Project between August 27-30, 1994.

A University of Alaska graduate student continued data analysis for a research project entitled "Summer foraging ecology of bison on the Delta River." This research will evaluate summer range forage availability and utilization by bison.

A bison census was flown on July 28, September 22 and 29, and October 10, 1994. We estimated a postcalving population of 446 bison. We collected sex and age composition data on September 19, 20, and 22, 1994, resulting in estimates of 70 bulls:100 cows and 53 calves:100 cows.

We issued drawing permits to take 20 bull (Hunt DI403) and 20 cow bison (Hunt DI404) from October 7, 1994-March 31, 1995. Preliminary data indicate that 19 hunters killed 19 bulls during Hunt DI403. During Hunt DI404, 19 hunters killed 18 cows and 1 bull. In addition, 1 bull was killed by a hunter with an Alaska Fish and Wildlife Safeguard raffle permit.

We pursued additional funding sources for management of the DJBR by trying to rejuvenate the bison raffle administered previously by Alaska Fish and Wildlife Safeguard. No progress was made initiating a new raffle.

The timing of the permit drawing hunt and the scheduling of hunters was organized to minimize conflicts between private landowners and bison hunters. The hunting season started October 7, after crops were harvested, and a staggered start was used for hunters.

Alaska Department of Transportation was contacted to investigate the development of bison viewing facilities using ISTEAF funding.

Progress Meeting Project Objectives: Herd health goals were accomplished with no serious wildlife diseases occurring in the herd. The Delta Junction Bison Range was successfully managed with permit application fees to reduce bison/agricultural conflicts. Bison movements were monitored to determine the level of bison/agricultural conflicts; however, bison movement dates did not meet management objectives. The department provided the greatest opportunity to hunt by issuing drawing permits. No progress was made estimating a budget to accomplish all goals and objectives, and no additional funding sources were located. Summer range analysis was continued by a University of Alaska graduate student to provide information on summer range forage. The permit drawing hunt was successfully administered in a method to reduce landowner/hunter conflicts.

Unit 25

Project Objectives and Activities:

1. Complete initial assessment of the suitability of the Yukon Flats as wood bison habitat.
2. Work with landowners and agencies to develop consensus on whether to proceed with a wood bison reintroduction; prepare a cooperative management plan.

3. Continue information efforts with the public and other agencies about the feasibility and potential benefits of reestablishing wood bison in Alaska.
4. Contract completion of an environmental assessment required by NEPA.
5. Investigate requirements for obtaining a CITES permit for translocating wood bison to the Yukon Flats.
6. Investigate potential release sites for habitat and logistic suitability.

Work Accomplished During the Project Segment Period: A report detailing the results of the habitat assessment work in June 1994 was completed and indicates the Yukon Flats can support a substantial number of wood bison. The results of biological investigations and ways to proceed in developing consensus on issues were discussed with landowners and agencies on a variety of occasions. A meeting between local government and agency representatives, including the chairman of the Wood Bison Recovery Team, was held in August 1994, followed by further discussions in connection with a meeting of the Wood Bison Recovery Team in Fort Yukon in May 1995. The reintroduction was also discussed in detail with FWS refuge and regional staff. Because agreement among key interests on how to proceed has not yet been reached, efforts to inform the public were limited, and an effort to contract an environmental assessment was delayed. Initial application for a CITES import permit was made and requirements for issuing a permit were obtained. An initial assessment of potential release sites was conducted, and ice thickness was measured on large lakes that might be suitable for landing by cargo aircraft.

Progress Meeting Project Objectives: Objectives 1 and 5 were largely accomplished and progress was made on objectives 2, 3, 4, and 6. Management objectives for the coming year should include continuing efforts on objectives 2 and 3. Efforts to further evaluate other potential wood bison habitat in Interior Alaska would be appropriate. Suggested revised objectives are as follows:

1. Work with landowners and agencies to develop consensus on whether to proceed with a wood bison reintroduction; prepare a cooperative management plan.
2. Continue information efforts with the public and other agencies about the feasibility and potential benefits of reestablishing wood bison in Alaska.
3. Determine whether significant wood bison habitat exists elsewhere in Interior Alaska.
4. Begin more detailed investigations and development of a release site on the Yukon Flats when progress in developing an implementation agreement and plan is apparent.

Segment Period Project Costs:

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	80.5	10.5	91.0
Actual	83.7	20.8	104.5
Difference	-3.2	-10.3	-13.5

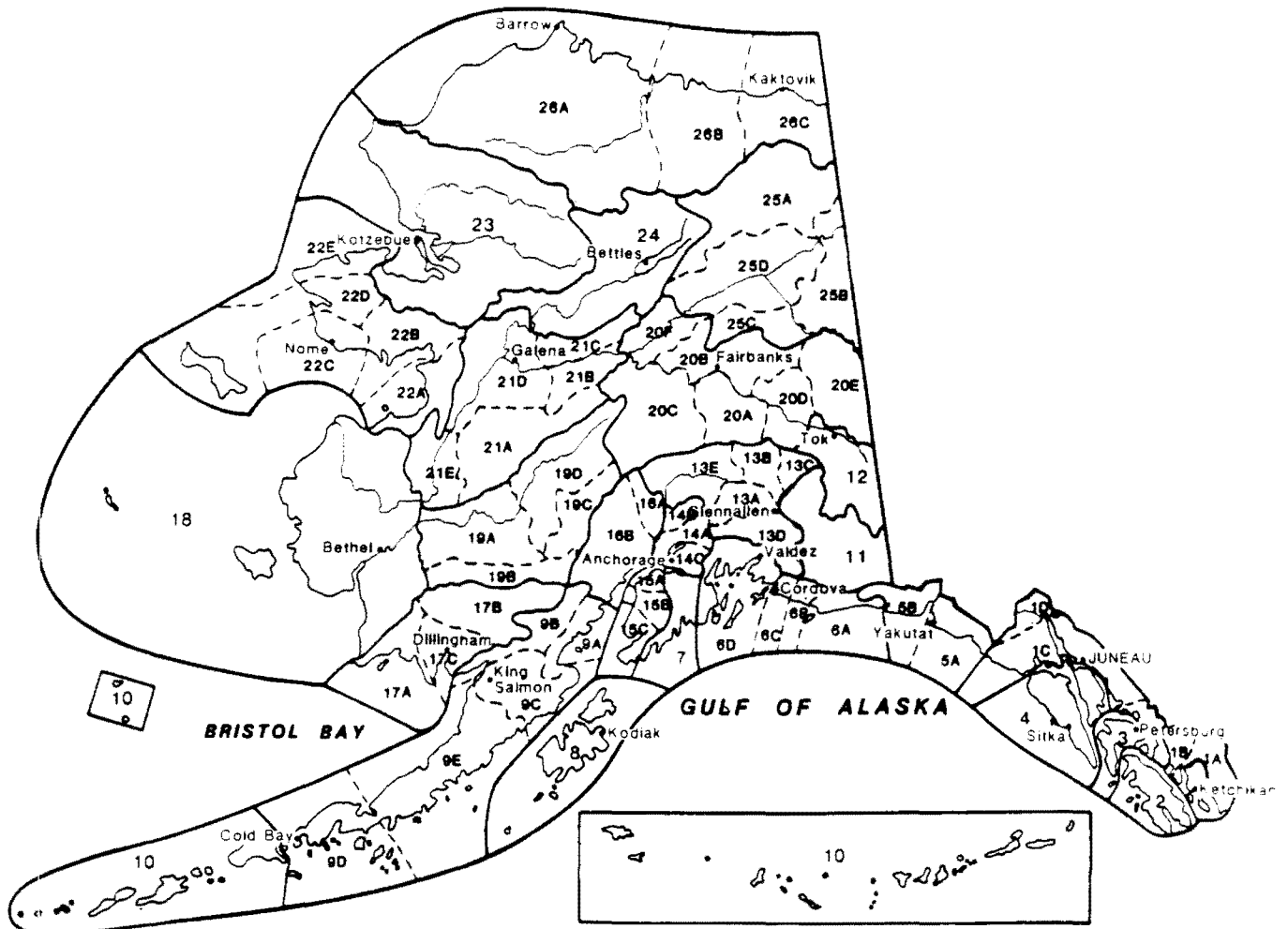
Explanation: Additional Fish and Game funds were used to purchase radiocollars and pay aircraft costs associated with telemetry studies on the Delta bison herd.

Submitted by:

Kenton P. Taylor
Regional Management Coordinator

NOTES

Alaska's Game Management Units



The Federal Aid in Wildlife Restoration Program consists of funds from a 10% to 11% manufacturer's excise tax collected from the sales of handguns, sporting rifles, shotguns, ammunition, and archery equipment. The Federal Aid program distributes funds to states using a formula based on each state's geographic area and number of paid hunting license holders. Alaska receives a maximum of 5% of revenues collected each year. The Alaska Department of Fish and Game uses its funds to help restore, conserve, and manage wild birds and mammals. These funds are also used to educate hunters to develop skills and attitudes for responsible hunting. Federal Aid funds paid for 75% of this study.

